

REMARKS

Claims 1-3, 5 and 12-14 are all the claims pending in the application.

I. Response to Rejection Under 35 U.S.C. § 102(b)

Claims 1-3, 5 and 12-14 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by WO 96/07941 A1 (“WO ‘941”).

WO ‘941 is relied upon as disclosing a polarizing plate comprising (i) a polarizing layer having a thickness of 1000-5000 nm, (ii) a rubbed substrate and (iii) a dye having a tabular molecular structure, the molecules being oriented to polarize light passing therethrough.

The Examiner conceded that WO ‘941 is silent as to whether the tabular molecular shape is oriented roughly perpendicular to the rubbing direction. However, it was asserted that the tabular molecular shape of WO ‘941 inherently will be oriented roughly perpendicular to the rubbing direction, relying on the teachings of U.S. Patent No. 6,563,640 to Ignatov et al.

Specifically, it was asserted that Ignatov et al demonstrates that “tabular dye forms are known to organize into linear ordered ensembles with their molecular planes mutually parallel but perpendicular to the ensemble axis,” and that although the ensembles align themselves parallel to the orientation axis of the substrate, the molecular planes, i.e., the molecules are mainly oriented perpendicular to the orientation axis.” The Examiner then concluded that at least some of the tabular dye embodiments of WO ‘941 have their molecules roughly perpendicular to the rubbing direction. See page 5 of the Office Action.

Applicants respectfully traverse the rejection for at least the following reasons.

The present invention is directed to a polarizing plate comprising a polarizing layer having a thickness of about 20 nm to about 1500 nm formed by rubbing at least one surface of a substrate, coating the rubbed surface of the substrate with an aqueous solution containing a dye having a tabular molecular shape, and drying the solution, wherein the dye having a tabular molecular shape coated on the rubbed surface of the substrate is oriented roughly perpendicular to the rubbing direction.

In Examples 1-3 disclosed in WO '941, a dye deposited on the PTFE alignment layer is oriented parallel, and not roughly perpendicular, to the direction of the PTFE chain. This is because the absorbance intensity of a polarized light in a direction parallel to an alignment of dye-containing film is greater than that in a direction perpendicular to the alignment of dye-containing film. See Figures 3 to 5 of WO '941.

Additionally, it is well known to those skilled in the art that PTFE chains are oriented in a direction parallel to a rubbing direction.

Therefore, in the polarizing layer of the polarizing plate described in WO '941, the dye coated on the rubbed surface of the substrate is oriented parallel to the rubbing direction.

Furthermore, Ignatov et al does not disclose or suggest rubbing treatment, let alone a dye oriented perpendicular to the rubbing direction. Further, Ignatov et al does not disclose or suggest the effect of the rubbing treatment. For these reasons, Applicants respectfully submit that Ignatov et al does not rectify the deficiencies of WO '941.

In view of the foregoing reasons, Applicants respectfully submit that there are no reasonable grounds in concluding that the tabular molecules in the embodiments described in

WO '941 are oriented *roughly perpendicular to the rubbing direction*. That is, WO '941 does not disclose or anticipate the present invention. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection.

II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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